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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* VOLKMAR HEUER

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Appeal 2009-1391  
Application 09/863,321  
Technology Center 2600

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Decided: April 16, 2009

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Before JOSEPH F. RUGGIERO, MAHSHID D. SAADAT, and  
ELENI MANTIS MERCADER, *Administrative Patent Judges*.

RUGGIERO, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Final Rejection of claims 1-3. Claims 4-10 have been indicated by the Examiner (Ans. 2) to be allowable. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

Rather than repeat the arguments of Appellant or the Examiner, we refer to the Appeal Brief filed on December 26, 2006 (supplemented March 15, 2007), the Examiner's Answer mailed on July 13, 2007, and the Reply Brief filed on September 13, 2007. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived [see 37 C.F.R. § 41.37(c)(1)(vii)].

### *Appellant's Invention*

The invention claimed on appeal relates to the transmission of a frame-structured synchronous multiplex signal composed of frames having a payload section and an overhead section over a synchronous digital transport network. According to Appellant, unlike the conventional technique in which an overhead section is deconstructed at network interfaces, a frame to be transmitted includes an unchanged overhead section which is packed as a payload in a concatenation of newly formed multiplex units. (*See generally* Spec. 3:31 to 4:31).

Claim 1 is illustrative of the invention and is reproduced as follows:

1. A method of transmitting, via a synchronous digital transport network, a frame-structured synchronous multiplex signal, composed of frames having a payload section and an overhead section, wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy, wherein the method comprises transmitting a frame

of the frame-structured synchronous multiplex signal to be transmitted, including its unchanged overhead section, as payload in a concatenation of newly formed multiplex units.

*The Examiner's Rejection*

The Examiner relies on the following prior art reference to show unpatentability:

Wakim	US 6,477,178 B1	Nov. 5, 2002
		(filed Mar. 31, 1998)

Claims 1-3 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Wakim.

ISSUE

*Under 35 U.S.C. § 102(e), does Wakim have a disclosure which anticipates the invention set forth in claims 1-3?*

The pivotal issue before us in making this determination is whether Appellant has demonstrated that the Examiner erred in determining that Wakim discloses the transmission of a frame-structured synchronous multiplex signal that includes its unchanged overhead section as part of a payload in a concatenation of newly formed multiplex units.

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Wakim discloses (Fig. 1; col. 3, ll. 58-67) a method of transmitting Synchronous Optical Network (SONET) multiplexed units over

a Synchronous Digital Hierarchy (SDH) network in which a network element 12 receives an incoming transport signal 22 which may be a Synchronous Transport Module level-4 (STM-4) signal.

2. Wakim also discloses (col. 4, ll. 8-22) that the network elements include synchronous payload envelope (SPE) decoders which receive the incoming STM-4 transport signal 22, as well as the incoming SONET-based transport signal 24.

3. The operation of the SPE decoders of Wakim is described (col. 4, ll. 8-16) as extracting the SPE payload envelopes of the incoming transport signals 22 and 24 and terminating the transport overhead section associated with the incoming transport signals.

4. Wakim further discloses (Fig. 2; col. 7, ll. 30-42) the mapping of a DS-3 signal into a virtual container level-3 SPE identified as VC-3 310 which includes a payload portion 312 and a synchronous path overhead portion 314.

5. Wakim also discloses (col. 7, ll. 30-42) the mapping of a plurality of VC-3 signals with their associated payload and overhead sections to form the payload of an STM-4 signal.

## PRINCIPLES OF LAW

It is well settled that in order for the Examiner to establish a *prima facie* case of anticipation, each and every element of the claimed invention, arranged as required by the claim, must be found in a single prior art reference, either expressly or under the principles of inherency. *See generally In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79 (Fed. Cir.

1988); *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69 (Fed. Cir. 1991) (quoting *Hansgirk v. Kemmer*, 102 F.2d 212, 214 (CCPA 1939). The reference must teach each and every claim limitation, it must be enabling, and it must describe the claimed subject matter sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

## ANALYSIS

Appellant’s arguments in response to the Examiner’s anticipation rejection, based on Wakim, of independent claim 1 assert that the Examiner has not shown how each of the claimed features is present in the disclosure of Wakim so as to establish a prima facie case of anticipation. Appellant’s arguments (App. Br. 11-12; Reply Br. 4) focus on the contention that, in contrast to the requirements of appealed independent claim 1, Wakim does not disclose the inclusion of the unchanged overhead section of a frame-structured multiplexed signal as part of the payload section in a concatenation of newly formed multiplex units. According to Appellant (App. Br. 11-12; Reply Br. 4), while Wakim does indeed disclose the mapping of containers with their path overhead sections unchanged, this mapping takes place after the containers have been extracted from the transport module and the transport module overhead has been terminated.

We agree with Appellant. The most reasonable interpretation of the disclosure of Wakim is that the transport signals 22, 24 (incoming) and 36, 38 (outgoing) are the elements which correspond to Appellant's claimed frame-structured synchronous multiplex signal. It is apparent from the disclosure of Wakim (*see* FF 3) that, as argued by Appellant, when the incoming transport signals are processed to form the outgoing transport signals, the overhead section of the incoming transport signals is not unchanged and included in the payload of the newly formed outgoing transport signals as claimed, but is in fact terminated.

We recognize that the Examiner has offered a somewhat different interpretation of the disclosure of Wakim. In the Examiner's view (Ans. 4-6), each of the virtual container level-3 SPE (VC-3) 310 signals, which are mapped into and form the synchronous module transport signal identified as STM-4 350 in Figure 2 of Wakim, are multiplexed units which are combined with other VC signals according to a multiplex hierarchy to form a payload section without having their overhead sections changed.

We initially note that, Appellant's arguments (App. Br. 14) to the contrary notwithstanding, we do not disagree with the Examiner's contention that the VC-3 virtual containers disclosed by Wakim can be considered to be frame-structured since they include both a synchronous path overhead section 314 and a payload section 312. We do agree, however, with Appellant's argument (App. Br. 13; Reply Br. 4-5) that, while Wakim's individual VC-3 containers may themselves be multiplexed units or may be concatenated containers, there is no disclosure in Wakim that these multiplex units include payload sections that are multiplexed according to a multiplex hierarchy as claimed.

In the response to arguments portion of the Answer at pages 6-8, the Examiner makes reference to the portion of Wakim at column 7, lines 12-42 which describes the mapping of DS-3 signals to form the virtual container VC-3 310. According to the Examiner (Ans. 6), “[i]t is well known in the art,” that a DS-3 signal is comprised of three DS-1 signals which multiplex into a DS-3 signal, then into a VC-3 signal according to a multiplex hierarchy. We simply find, however, no evidence within the disclosure of Wakim, or elsewhere in the evidentiary record before us, to support the Examiner’s position.

With the above discussion in mind, it is our opinion that even if we accept, *arguendo*, the Examiner’s position that the virtual containers VC-3 in Wakim can be considered as frame-structured multiplex signals with their unchanged overhead sections as part of the payload, there is no indication from Wakim, or elsewhere, that any such multiplexed units are formed according to a multiplex hierarchy as claimed. In order for us to sustain the Examiner’s rejection, we would need to resort to impermissible speculation or unfounded assumptions or rationales to supply deficiencies in the factual basis of the rejection before us. *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967).

In view of the above discussion, since Appellant’s arguments have demonstrated that the Examiner erred in determining that all of the claim limitations are present in the disclosure of Wakim, we do not sustain the Examiner’s 35 U.S.C. § 102(e) rejection of appealed independent claim 1, nor of claims 2 and 3 dependent thereon.



### CONCLUSION

Based on the findings of facts and analysis above, we conclude that Appellant has shown that the Examiner erred in rejecting claims 1-3 for anticipation under 35 U.S.C. § 102(e).

### DECISION

The Examiner's decision rejecting claims 1-3 under 35 U.S.C. § 102(e) is reversed.

### REVERSED

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